

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "14a" and "24a" have both been used to designate upper supporting glass. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 11 – 14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 1,481,680 to Brindel, herein referred to as Brindel, in further view of US Patent 4,302,250 to Danielson, herein referred to as Danielson.

Regarding claim 11 Brindel teaches in figures 1 – 4, a method for lighting, comprising the steps of: providing a lamp (improved lamp bulb, page 1, line 41) comprising a light transmitting bulb (transparent light bulb (1), page 1, line 42), a bulb base (external threaded shell (3), page 1, lines 44 – 45) equipped with a pair of inner terminals (wire (7), line 105 and wire (8), page 1, line 89) and a pair of outer terminals (flange (20) line 91 and socket (25), page 1, line 106, the Examiner notes that since the Flange (20) and the socket (25) are used as electrical outputs they serve the role of outer terminals), a light emitting means composed of plural filaments (filaments (13) and (18), page 1, lines 74 and 101) extended in parallel with each other between the inner terminals (wires (7), (8)) in which at least one filament and other filament are disposed oppositely to each other and shielded from each other with a light transmitting shielding plate (Insulating disc 11, formed of glass, page 1, lines 60 – 61), to lighting fittings;

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causing all filaments in the halogen lamp to emit light simultaneously (refer to page1, lines 81 – 89).

Brindel fails to teach, a halogen gas or halogen compound gas.

However Danielson describes an incandescent lamp with halogen fill gas.

Motivation to combine Danielson's halogen fill gas with Brindel's lamp is to increase the illumination and increase the durability of the lamp, as stated in column 1 lines 10 – 15. Further a lamp with halogen fill can operate at a higher temperature than in a standard incandescent lamp of similar wattage without loss of operating life.

Therefore it would have been obvious to one of ordinary skill in the art at the time invention was made to include Danielson's halogen fill gas in Brindel's lamp to increase the lifetime and brightness of the lamp. Danielson's and Brindel's inventions are in the same field of endeavor.

Regarding claim 12 Brindel and Danielson discloses and teaches, the method of claim 11, Brindel further teaches in which the light transmitting shielding plate shields all imaginary lines connecting the filaments disposed oppositely to each other. Refer to page 1, lines 60 - 62 where it discusses the insulating disc (11).

Regarding claim 13 Brindel and Danielson discloses and teaches, the method of claim 11, Brindel further teaches in which the light emitting means is composed of two filaments. Refer to page 1, lines 74 – 101 where the filaments (13) and (18) structure.

Regarding claim 14 Brindel and Danielson discloses and teaches, the

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method of claim 13, Brindel further teaches in which the two filaments have the same electric capacity. Refer to page 2 lines 16 – 24 where it discusses the filaments (13) and (18) having the same wattage.

Regarding claim 17 Brindel and Danielson discloses and teaches, the method of claim 13, Brindel further teaches in which the two filaments show the same color temperature. Since the filaments (13) and (18) have the same wattage and are made of the same material it is inherent that they have the same color temperature.

Claims 11,13, 16, 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 1,513,407 to Lombos, herein refer to as Lombos, in further view of US Patent 4,302,250 to Danielson, herein refer to as Danielson.

Regarding claim 11, Lombos teaches in figure 1 – 2, a method for lighting, comprising the steps of: providing a lamp comprising a light transmitting bulb (transparent light bulb (25), page 1, line 71), a bulb base (threaded shell (16), page 1, lines 61 - 62) equipped with a pair of inner terminals (wire (30), line 92 and wire (36) (37), (38), (39), page 1, lines 79 - 82) and a pair of outer terminals (terminal (28) line 74 and switch bars (55), (56), (57), page 1, line 101), a light emitting means composed of plural filaments (filaments (71), (70), (69), and (68), page 2 lines 33 - 39) extended in parallel with each other between the inner terminals (wire (30), line 92 and wire (36) (37), (38), (39), page 1, lines 79 - 82) , in which at least one filament and other filament are disposed oppositely to each

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other and shielded from each other with a light transmitting shielding plate (Cross bars or disc (41), (42), (43) formed of insulating material, page 1, lines 84 - 85), to lighting fittings; causing all filaments in the lamp to emit light simultaneously (refer to page 2, lines 19 – 36); and keeping the light emission of other filament when one filament breaks down to cease light emitting. This limitation is discussed on page 2, lines 36 - 45.

Lombos fails to teach, a halogen gas or halogen compound gas.

However Danielson describes an incandescent lamp with halogen fill gas. Motivation to combine Danielson's halogen fill gas with Lombos' lamp is to increase the illumination and increase the durability of the lamp, as stated in column 1 lines 10 – 15. Further a lamp with halogen fill gas can operate at a higher temperature than in a standard incandescent lamp of similar wattage without loss of operating life.

Therefore it would have been obvious to one of ordinary skill in the art at the time invention was made to include Danielson's halogen fill gas in Lombos' lamp to increase the lifetime and brightness of the lamp. Danielson's and Lombos' inventions are in the same field of endeavor.

Regarding claim 13, Lombos and Danielson discloses and teaches, the method of claim 11, Lombos further teaches in which the light emitting means is composed of two filaments. Refer to the structure of the filaments (69) and (70) on page 2 lines 33 - 39.

Regarding claim 15, Lombos and Danielson discloses and teaches, the method of claim 13, Lombos further teaches in which one filament an electric

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capacity that is less than an electric capacity of other filament. Refer to page 2, lines 16 - 18.

Regarding claim 16 Lombos and Danielson discloses and teaches, the method of claim 15, Lombos further teaches in which the electric capacity of the former filament is 30% or more based on the electric capacity of latter filament. It would have been obvious to one of ordinary skill in the art at the time the invention was made to increase the electric capacity 30% for higher illumination. Refer to page 2, lines 16 – 18.

Regarding claim 18 Lombos and Danielson discloses and teaches, the method of claim 13, Lombos further teaches in which one filament shows a color temperature higher than a color temperature of other filament. Since Lombos teaches filaments having different electrical capacity they should have a different color temperature. Refer to page 2, lines 16 – 18.

Regarding claim 19 Lombos and Danielson discloses and teaches, the method of claim 18, Lombos further teaches in which the color temperature of the former filament is higher than the color temperature of the latter filament by 100 K or less. Since Lombos teaches filaments having different electrical capacity they should have a different color temperature. It would be obvious to one of ordinary skill that the color temperature of the latter filament by 100 K or less.

Regarding claim 20 Lombos teaches in figure 1 – 2, the method of claim 13, in which the Lamp comprises a light transmitting bulb (transparent light bulb (25), page 1, line 71), a bulb base (threaded shell (16), page 1, lines 61 - 62)

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equipped with a pair of inner terminals (wire (30), page 1, line 92 and wire (36) (37), (38), (39), page 1, lines 79 - 82) and a pair of outer terminals (terminal (28), page 1, line 74 and switch bars (55), (56), (57), page 1, line 101), a lower supporting glass (cross bar, page 1, line 43) fixed to the top of the inner terminals, a supporting pole (post (40), page 1, line 86) fixed to the lower supporting glass at its bottom and extended upwardly, a upper supporting glass (cross bar (41)) fixed to the supporting pole, a light transmitting shielding plate (cross bar (42)) arranged along the supporting pole between the upper supporting glass and the lower supporting glass, one filament (filaments (69)) extended on one side of the light transmitting shielding plate between one inner terminal (wire (32)) and another inner terminal (wire (37)) and being hung from the upper supporting glass, and another filament (filaments (70)) extended on another side of the light transmitting shielding plate (cross bar (42)) between one inner terminal (wire (33)) and another inner terminal (wire (38)) and being hung from at the upper supporting glass.

Lombos fails to teach, a halogen gas or halogen compound gas.

However Danielson describes an incandescent lamp with halogen fill gas. Motivation to combine Danielson's halogen fill gas with Brindel's lamp is to increase the illumination and increase the durability of the lamp, as stated in column 1 lines 10 – 15. Further a lamp with halogen fill can operate at a higher temperature than in a standard incandescent lamp of similar wattage without loss of operating life.

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Therefore it would have been obvious to one of ordinary skill in the art at the time invention was made to include Danielson's gas halogen fill gas in Lombos' lamp to increase the lifetime and brightness of the lamp. Danielson's and Lombos' inventions are in the same field of endeavor.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron Williams whose telephone number is (571) 270-5279. The examiner can normally be reached on Monday thru Friday 7:00 to 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Toan Ton can be reached on (571)272-2303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aaron Williams/
Examiner, Art Unit 2889

/Karabi Guharay/
Primary Examiner, Art Unit 2889